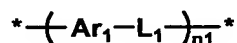


What is claimed is:

1. An organic electroluminescent element comprising a cathode and an anode having therebetween at least one organic compound layer,

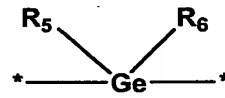
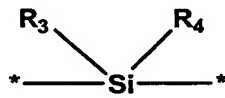
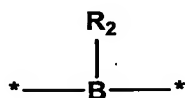
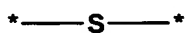
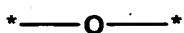
wherein one of the organic compound layer comprises a polymer having a repeat unit represented by Formula (1):

Formula (1)



wherein Ar<sub>1</sub> represents an arylene group which may have a substituent or a heteroarylene group having not more than two heteroatoms, which may have a substituent; and L<sub>1</sub> represents a linkage group selected from Group 1; and n<sub>1</sub> represents an integer of not less than two:

Group 1



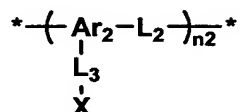
wherein R<sub>1</sub> - R<sub>6</sub> each independently represent an alkyl group or an aryl group, provided that R<sub>3</sub> and R<sub>4</sub>, or R<sub>5</sub> and R<sub>6</sub> may be joined to form a ring.

2. The organic electroluminescent element of claim 1, wherein a number of rings of Ar<sub>1</sub> in Formula (1) is not more than 5.

3. An organic electroluminescent element comprising a cathode and an anode having therebetween at least one organic compound layer,

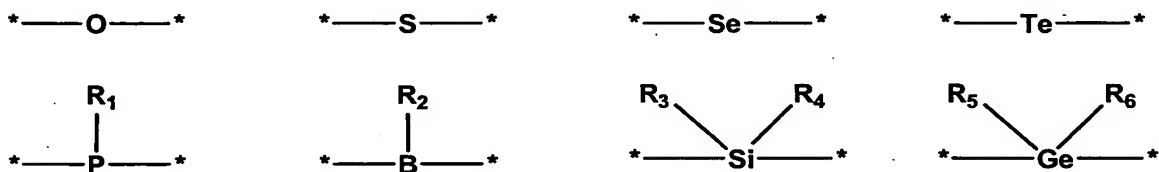
wherein one of the organic compound layer comprises a polymer having one of repeat units represented by Formula (2):

Formula (2)

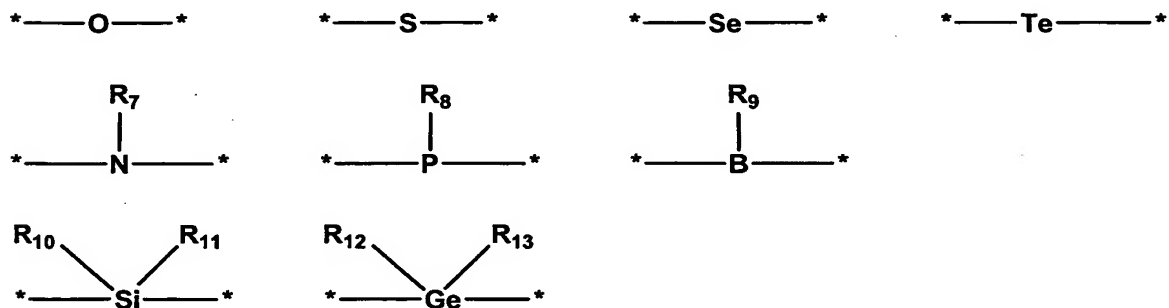


wherein Ar<sub>2</sub> represents an arylene group which may have a substituent or a heteroarylene group having not more than two heteroatoms, which may have a substituent; L<sub>2</sub> represents a linkage group selected from Group 2; and L<sub>3</sub> represents a single bond or a linkage group selected from Group 3; X represents one of a hole transport group, an electron transport group, a fluorescent group and a phosphorescent group; and n<sub>2</sub> represents an integer of not less than two:

Group 2



Group 3



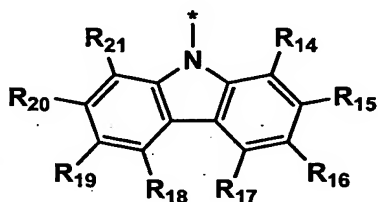
wherein R<sub>1</sub> - R<sub>6</sub> each independently represent an alkyl group or an aryl group, provided that R<sub>3</sub> and R<sub>4</sub>, or R<sub>5</sub> and R<sub>6</sub> may be

joined to form a ring, and  $R_7 - R_{13}$  each independently represent an alkyl group or an aryl group, provided that  $R_{10}$  and  $R_{11}$ , or  $R_{12}$  and  $R_{13}$  may be joined to form a ring.

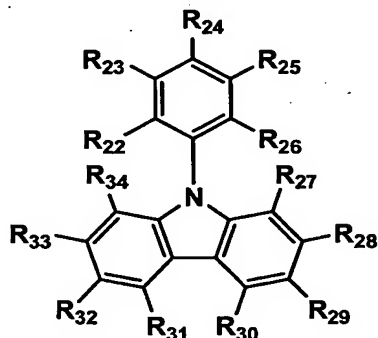
4. The organic electroluminescent element of claim 3, wherein a number of rings of  $Ar_2$  in Formula (2) is not more than 5.

5. The organic electroluminescent element of claim 3, wherein the hole transport group includes a substructure represented by Formula (3) or Formula (4):

Formula (3)



Formula (4)



wherein

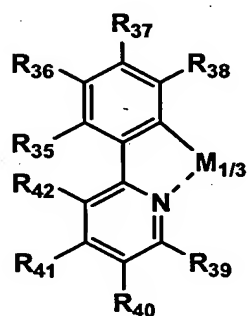
in Formula (3),  $R_{14} - R_{21}$  each independently represent a hydrogen atom, an alkyl group or a cycloalkyl group, provided that adjacent groups of  $R_{14} - R_{21}$  may be joined to form a ring; and

in Formula (4),  $R_{22}$  -  $R_{30}$  each independently represent a hydrogen atom, an alkyl group or a cycloalkyl group, and  $R_{31}$  -  $R_{34}$  each independently represent a hydrogen atom, a single bond, an alkyl group or a cycloalkyl group, provided that one of  $R_{31}$  -  $R_{34}$  represents a single bond, and that adjacent groups of  $R_{22}$  -  $R_{34}$  may be joined to form a ring.

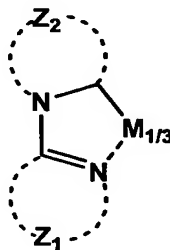
6. The organic electroluminescent element of claim 3, wherein the phosphorescent group comprises an organometal complex.

7. The organic electroluminescent element of claim 6, wherein the organometal complex comprises a substructure represented by one of Formulas (5) to (8):

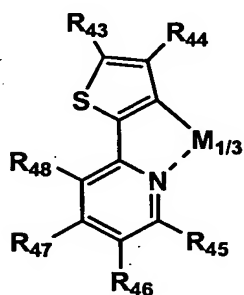
Formula (5)



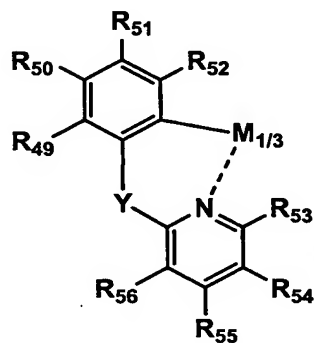
Formula (6)



Formula (7)



Formula (8)



wherein

in Formula (5),  $R_{35}$  -  $R_{42}$  each independently represent a hydrogen atom, a single bond or a substituent, provided that adjacent groups of  $R_{35}$  -  $R_{42}$  may be joined to form a ring, and M represents a metal atom;

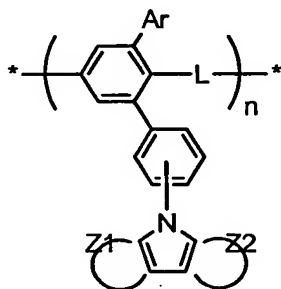
in Formula (6),  $Z_1$  and  $Z_2$  each independently represent a group of atoms necessary to form an aromatic ring together with a carbon atom and a nitrogen atom, and M represents a metal atom;

in Formula (7),  $R_{43}$  -  $R_{48}$  each independently represent a hydrogen atom, a single bond or a substituent, provided that adjacent groups of  $R_{43}$  -  $R_{48}$  may be joined to form a ring, and M represents a metal atom; and

in Formula (8), Y represents a divalent linkage group,  $R_{49}$  -  $R_{56}$  each independently represent a hydrogen atom, a single bond or a substituent, provided that adjacent groups of  $R_{49}$  -  $R_{56}$  may be joined to form a ring, and M represents a metal atom.

8. The organic electroluminescent element of claim 3, wherein one of the repeat units represented by Formula (2) is further represented by Formula (21):

Formula (21)

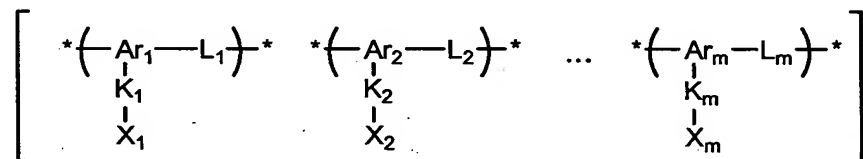


wherein Ar represents an arylene group which may have a substituent or a heteroarylene group which may have a substituent;  $Z_1$  and  $Z_2$  each represent a 6-membered aromatic ring comprising a group of atoms of carbon, hydrogen or nitrogen, provided that  $Z_1$  and  $Z_2$  may be different.

9. An organic electroluminescent element comprising a cathode and an anode having therebetween at least one organic compound layer,

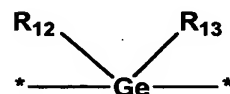
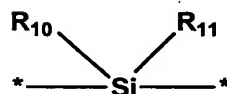
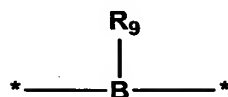
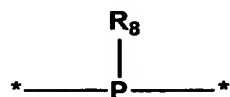
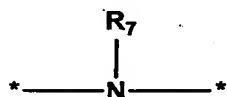
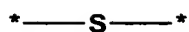
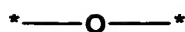
wherein one of the organic compound layer comprises a copolymer represented by Formula (22):

Formula (22)



wherein  $\text{Ar}_1$  to  $\text{Ar}_m$  each represent an arylene group which may have a substituent or a heteroarylene group which may have a substituent;  $m$  represents an integer of not less than two;  $\text{Ar}_1$  to  $\text{Ar}_m$  may be the same or may be different; the heteroarylene group comprises not more than two heteroatoms;  $\text{K}_1$  to  $\text{K}_m$  each represent a single bond or a linkage group selected from Group 3; and  $\text{X}_1$  to  $\text{X}_m$  each represent a hole transport group, an electron transport group or a phosphorescent group:

## Group 3



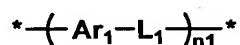
wherein  $R_7 - R_{13}$  each independently represent an alkyl group or an aryl group, provided that  $R_{10}$  and  $R_{11}$ , or  $R_{12}$  and  $R_{13}$  may be joined to form a ring.

10. An organic electroluminescent element comprising a cathode and an anode having therebetween at least one organic compound layer,

wherein one of the organic compound layer comprises a mixture of two or more polymers each represented by Formulas (1),

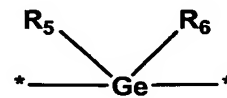
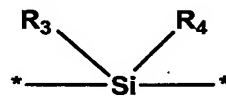
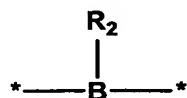
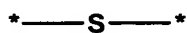
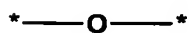
(2), (21) or (22):

Formula (1)



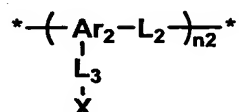
wherein  $Ar_1$  represents an arylene group which may have a substituent or a heteroarylene group having not more than two heteroatoms, which may have a substituent; and  $L_1$  represents a linkage group selected from Group 1; and  $n_1$  represents an integer of not less than two:

## Group 1



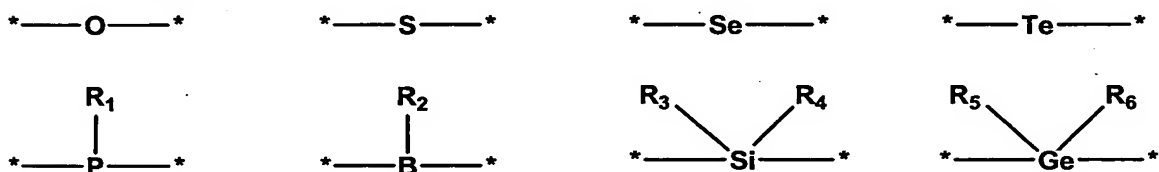
wherein  $R_1 - R_6$  each independently represent an alkyl group or an aryl group, provided that  $R_3$  and  $R_4$ , or  $R_5$  and  $R_6$  may be joined to form a ring,

Formula (2)

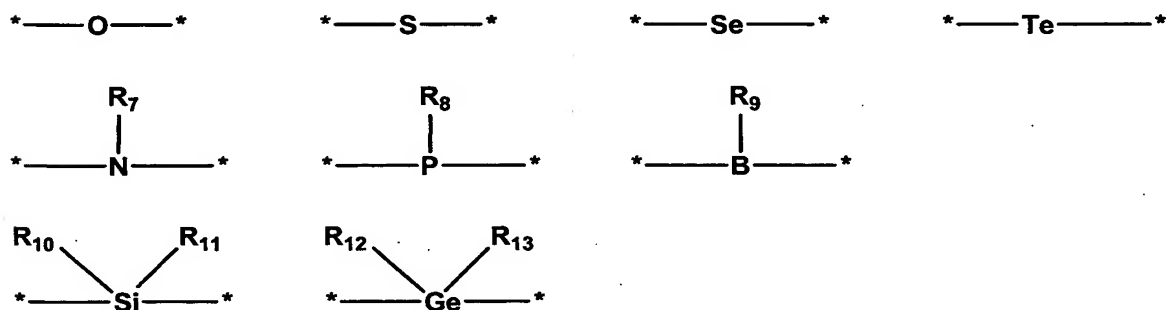


wherein  $\text{Ar}_2$  represents an arylene group which may have a substituent or a heteroarylene group having not more than two heteroatoms, which may have a substituent;  $\text{L}_2$  represents a linkage group selected from Group 2; and  $\text{L}_3$  represents a single bond or a linkage group selected from Group 3;  $\text{X}$  represents one of a hole transport group, an electron transport group, a fluorescent group and a phosphorescent group; and  $n_2$  represents an integer of not less than two:

Group 2



Group 3

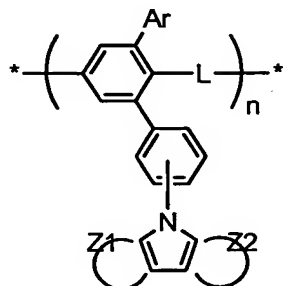


wherein  $R_1 - R_6$  each independently represent an alkyl group or an aryl group, provided that  $R_3$  and  $R_4$ , or  $R_5$  and  $R_6$  may be



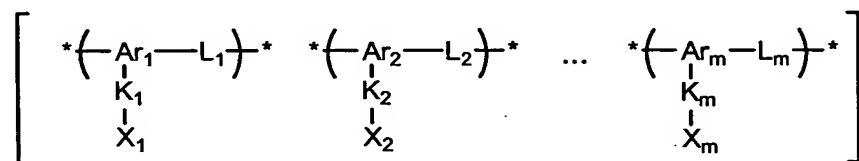
joined to form a ring, and  $R_7 - R_{13}$  each independently represent an alkyl group or an aryl group, provided that  $R_{10}$  and  $R_{11}$ , or  $R_{12}$  and  $R_{13}$  may be joined to form a ring,

Formula (21)



wherein Ar represents an arylene group which may have a substituent or a heteroarylene group which may have a substituent;  $Z_1$  and  $Z_2$  each represent a 6-membered aromatic ring comprising a group of atoms of carbon, hydrogen or nitrogen, provided that  $Z_1$  and  $Z_2$  may be different., and

Formula (22)



wherein  $\text{Ar}_1$  to  $\text{Ar}_m$  each represent an arylene group which may have a substituent or a heteroarylene group which may have a substituent;  $m$  represents an integer of not less than two;  $\text{Ar}_1$  to  $\text{Ar}_m$  may be the same or may be different; the heteroarylene group comprises not more than two heteroatoms;  $\text{K}_1$  to  $\text{K}_m$  each represent a single bond or a linkage group selected from above Group 3; and  $\text{X}_1$  to  $\text{X}_m$  each represent a hole transport group, an electron transport group or a phosphorescent group.

11. The organic electroluminescent element of claim 1, wherein the organic electroluminescent element emits white light.

12. A display equipped with the organic electroluminescent element of claim 1.

13. An illuminator equipped with the organic electroluminescent element of claim 1.

14. A display equipped with the illuminator of claim 13 and a liquid crystal cell as a display means.

15. The organic electroluminescent element of claim 3, wherein the organic electroluminescent element emits white light.

16. A display equipped with the organic electroluminescent element of claim 3.

17. An illuminator equipped with the organic electroluminescent element of claim 3.

18. A display equipped with the illuminator of claim 17 and a liquid crystal cell as a display means.

19. The organic electroluminescent element of claim 9, wherein the organic electroluminescent element emits white light.

20. A display equipped with the organic electroluminescent element of claim 9.

21. An illuminator equipped with the organic electroluminescent element of claim 9.

22. A display equipped with the illuminator of claim 21 and a liquid crystal cell as a display means.

23. The organic electroluminescent element of claim 10, wherein the organic electroluminescent element emits white light.

24. A display equipped with the organic electroluminescent element of claim 10.

25. An illuminator equipped with the organic electroluminescent element of claim 10.

26. A display equipped with the illuminator of claim 25 and a liquid crystal cell as a display means.